

**SCIENTIFIC RESEARCH AND EXPERIMENTAL
DEVELOPMENT: TAX POLICY**

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SCIENTIFIC RESEARCH AND EXPERIMENTAL DEVELOPMENT: TAX POLICY*

ISSUE DEFINITION

The role of Scientific Research and Experimental Development (SR&ED) in strengthening the competitive position of industry in the medium and long term is well established. SR&ED activities improve the quality of processes and products, result in innovation through the creation of new processes and products, and enhance corporate productivity and reduce operating costs, thereby increasing profitability. Nor are the benefits of SR&ED limited to the industrial sector; the entire economy benefits from initiatives in this area. In fact, scientific research is crucial to sustained economic growth and an improved standard of living.

For these reasons, the federal government has long been a supporter of research activities in industry. In addition to providing subsidies and contracts to encourage research, it supports corporate SR&ED through tax incentives. These differ from direct financing mechanisms in that they are relatively neutral with respect to specific SR&ED activities or sectors of production. The industrial sector is in the best position to decide the type and amount of scientific research it should undertake and companies are free to decide where to make SR&ED investments.

Fiscal measures modify the after-tax cost of SR&ED investments in that businesses incurring SR&ED expenditures are entitled to tax deductions and credits. These measures therefore represent a tax expense, or loss of revenue, for the government. Tax measures may either serve as a substitute for budget expenditures or complement direct financing methods. They are, however, much more difficult to evaluate and control.

* This publication is a revised version of the earlier paper *Research Development: Tax Policy* first published in October 1989 and regularly updated since that time.

This current issue review looks at the basis for government action in this area and at how federal tax measures in respect of SR&ED generally work. The history of tax incentives for industrial SR&ED in Canada is then examined, and some observations are made on tax incentives for scientific research.

BACKGROUND AND ANALYSIS

A. Justification for Government Support of SR&ED

Government funding of industrial SR&ED is generally considered justifiable because the resulting benefits to society are greater than the benefits to individual firms. The company conducting SR&ED activities is not always in a position to take full advantage of related benefits, but some of the knowledge gained benefits the community in general. Furthermore, SR&ED results can be copied, at times even before the innovating company has had the opportunity to recover all of its costs. Moreover, the degree of financial risk associated with SR&ED activities may discourage companies from investing in research. It is argued that unless the government promotes industrial SR&ED, it is quite likely that companies will not invest sufficiently in SR&ED activities, since their actions will be guided solely by the returns they hope to generate.

Even without any kind of government incentive, some industrial SR&ED research would be carried out, but this would be only as much as would bring private benefits. Consequently, any kind of incentive will have a positive impact if it prompts businesses to make more than this minimum SR&ED effort. That is the goal of the federal government's industrial innovation policy, which is aimed at correcting the legendary under investment in SR&ED by Canadian corporations.

B. Delivery of SR&ED Tax Incentives

Federal government tax incentives for SR&ED target three types of research: basic research, work performed for the advancement of knowledge and science without any practical application in mind; applied research, carried out for the advancement of science, but with a specific application in mind; and experimental development, aimed at achieving technological

progress. In experimental development the results of basic and applied research are used to create new products or processes, or to improve those that already exist.

To take advantage of tax incentives for SR&ED, a company must be able to show that it has invested in one of these types of research. Both current and capital expenditures qualify for federal SR&ED tax incentives. Current expenditures include the salaries of research personnel, general SR&ED costs (telephone and electricity, office equipment and so forth), as well as costs, including maintenance costs, associated with facilities and equipment used for SR&ED purposes. Capital expenditures include assets -- facilities and equipment but not buildings -- used for SR&ED purposes.

For the purposes of SR&ED incentives, corporations are classified according to their size and controlling interest. In one category are Canadian-controlled private corporations (CCPCs) established in Canada and controlled neither by government-owned agencies nor by non-residents; a "small" CCPC is a corporation with a taxable income of less than \$200,000. All remaining corporations fall into the other category.

Canadian corporations that incur eligible research expenses may benefit from three federal SR&ED tax incentives: the deduction, the tax credit and, in some instances, the tax credit refund. The aim of SR&ED incentives is to compensate for the high degree of risk involved in investing in research activities by lowering their real costs; the ultimate goal is to enhance the overall SR&ED effort in Canada.

The deduction lowers taxable income and consequently, the tax payable. With the deduction, a business that spends \$1,000 on SR&ED activities and is taxed at the rate of 30% saves \$300 ($\$1,000 * 30\%$). Thus, its net cost for SR&ED is \$700.

The tax credit, which applies to a percentage of overall SR&ED, serves directly to lower the tax payable. Suppose that the business in the example above also qualifies for a tax credit of 20%. The value of the credit is \$200 ($\$1,000 * 20\%$). However, for corporate tax purposes, the tax credit amount is considered income and must be included in the firm's taxable income. Thus, the firm's real savings will total $\$200 * (1-30\%)$ or \$140. If the company owes little or no tax at all, it can even claim a total or partial refund of this tax credit.

Therefore, tax measures lower the after-tax cost of SR&ED investment. In the above example, the real cost of SR&ED is \$560, or $(\$1,000 - \$440)$. In other words, tax measures allow a firm to recover more than 40% of its initial SR&ED investment.

Such tax measures, which lower a firm's initial SR&ED costs, represent a tax expenditure or loss of revenue for the federal government (in our example, a loss of \$440). The federal government believes that this loss of revenue leads to increased SR&ED activities in Canada and ultimately, to positive spinoffs which outweigh the drop in federal revenues. These spinoffs benefit not only the industrial sector, but the entire Canadian economy.

C. Historical Overview

The history of federal tax incentives for SR&ED can be divided into three periods. Between 1944 and 1986, traditional tax measures such as the deduction and the tax credit were introduced, together with some additional tax measures that were tested and found wanting. Between 1986 and 1993, the deduction and the tax credit were fine-tuned to facilitate their use and improve the administration process. In 1994, which marks the start of the third period, the focus has been on broadening and facilitating access to the SR&ED tax system. Tables 1 and 2 show and compare the evolution of the principal features of SR&ED tax incentives.

1. From 1944 to 1986

The federal government has for many years been stimulating SR&ED activities through the *Income Tax Act*. As early as 1944, companies could, pursuant to this legislation, deduct immediately from their taxable income an amount equivalent to 100% of current expenditures in respect of scientific research. Until 1960, companies could also deduct one-third of capital expenditures incurred for SR&ED in a taxation year. The legislation was amended in 1961 to make capital expenditures fully deductible in the taxation year in which they were incurred.

From 1962 to 1966, the federal government also allowed an incremental tax deduction equivalent to 50% of current and capital expenditures exceeding the 1961 level. As the name indicates, the incremental tax deduction allowed companies with higher SR&ED expenditures to lower their taxable income even further. Companies claiming the additional deduction reduced

their taxes by approximately \$60 million during this period. The measure was replaced in 1967 by cash grants introduced under the *Industrial Research and Development Incentives Act* (IRDIA). These cash grants were equal to 25% of capital expenditures and 25% of current expenditures in excess of the average for the preceding five years. Their purpose was to offer the same benefits as the additional 50% deduction, while providing financial support to non-taxable companies involved in SR&ED, in particular small CCPCs previously unable to take advantage of federal tax policy. Nearly \$290 million was awarded under the IRDIA, which was repealed in 1975.

The federal government further amended the *Income Tax Act* in 1977, introducing a tax credit ranging from 5% to 10% of current and capital expenditures, depending on the nature of the firm and the region in Canada where the activities were carried out. A new legislative provision, whereby the tax credit had to be taken into account in calculating taxable income was introduced; this provision, which has decreased the full effect of the tax credit through the company's rate of taxation, is still in effect today. In addition, in 1978 the basic tax credit rate was increased to 10%, the exceptions being the Atlantic provinces and the Gaspé region, where the rate rose to 20%, and small businesses, where it rose to 25%.

That same year, the federal government introduced another SR&ED tax incentive in the form of additional tax relief for scientific research. The deduction is similar to that in effect between 1962 and 1966. Companies were allowed to deduct from their taxable income 50% of all SR&ED expenditures exceeding their recorded average for the three preceding years. Since the goal was to attract venture capital, companies conducting SR&ED were allowed to waive the tax deduction and transfer it to outside investors. This measure spawned abuses, however.

At that time, certain non-taxable companies could not claim the general deduction or the tax credit, while others could not claim the full deduction and credit. This encouraged them to seek out new mechanisms to transfer these tax incentives to those who could use them. Some people set up limited partnerships to act as outside investors. A passive outside investor could arrange to have a research firm conduct SR&ED on his behalf. Investments of this nature increased the company's research expenditures, thereby qualifying the investor for the tax deduction and credit. Moreover, SR&ED expenditures that were not considered "additional" for the research company were viewed as such for the investor, who had previously incurred no such

expenses at all. The passive investor was thus also able to benefit from the incremental 50% deduction. It is estimated that claims related to tax relief cost the federal government more than \$2.5 billion.

As a result of reported abuses, the federal government abolished the 50% incremental deduction in 1983 and introduced new tax provisions. To begin with, the tax credit rates were increased by 10 percentage points over their 1978 level. The basic rate was set at 20%, while the rate in effect in the Atlantic provinces and the Gaspé region was set at 30% and the rate for small CCPCs was set at 35%. The government then introduced excellent carry-forward provisions for the tax deduction and credit. Corporations were allowed to carry forward their SR&ED deduction indefinitely to offset future taxable income. Unused tax credits could be combined and either carried back for three years or forward for seven. The federal government also made certain corporations eligible to receive tax credits in the form of a cash refund. In the case of large corporations, the refunds were equal to 20% of the value of the tax credits, while for small CCPCs, the rate was 100% on the first \$2 million of eligible SR&ED expenditures and 40% on capital expenditures linked to scientific research. The federal government introduced this refund to ensure that small CCPCs with no tax payable would also benefit from tax incentives.

The last measure introduced was the scientific research tax credit. Companies were able to enter into research contracts on behalf of an outside investor who had acquired shares or debt securities for SR&ED purposes. To offset this move, companies were required to waive their tax incentives, while outside investors qualified for a tax credit of 50% of their investment. This measure also proved to be an excellent tax loophole. It allowed outside investors to turn a quick profit by investing in research, without anything to show that the tax savings thus realized were being poured back into SR&ED activities. As a result of this mechanism, outside investors benefited from more than \$1.6 billion in tax relief between 1983 and 1985, the year in which the measure was abolished.

TABLE 1
DEDUCTION IN RESPECT OF SR&ED EXPENDITURES

SPECIFICS	BEFORE 1967	FROM 1967 TO 1993	SYSTEM IN EFFECT SINCE 1994	NEW PROPOSALS
CALCULATION OF TAXABLE INCOME	Total income minus eligible SR&ED expenditures plus claimed federal tax credit	Total income minus eligible SR&ED expenditures, except building acquisition, plus claimed federal tax credit	Existing method of calculation continues to apply.	No change.
TYPE OF EXPENDITURE	<ol style="list-style-type: none"> All current and capital expenditures incurred in Canada for SR&ED purposes are deductible. Only those current expenditures incurred abroad for SR&ED activities are deductible. Capital expenditures are not deductible. 	<ol style="list-style-type: none"> All current and capital expenditures incurred in Canada for SR&ED purposes, except for those related to building acquisition, are deductible. Existing rules continue to apply. 	<ol style="list-style-type: none"> Existing rules continue to apply. Existing rules continue to apply. 	<ol style="list-style-type: none"> No change. No change.
POOLING AND CARRY FORWARD OPTIONS	<ol style="list-style-type: none"> SR&ED expenditures incurred in Canada may 1) be deducted immediately or 2) be pooled and carried forward for an indefinite number of years. Current SR&ED expenditures incurred abroad must be deducted immediately. 	<ol style="list-style-type: none"> Existing rules continue to apply. Existing rules continue to apply. 	<ol style="list-style-type: none"> Existing rules continue to apply. Existing rules continue to apply. 	<ol style="list-style-type: none"> No change. No change.
QUALIFYING EXPENDITURES	Current and capital expenditures all or substantially all attributable to SR&ED activities (more than 90%) are deductible.	<ol style="list-style-type: none"> Existing rules continue to apply. Beneficiary of the deduction must be directly associated with SR&ED activities. 	<ol style="list-style-type: none"> Existing rules continue to apply. Existing rules continue to apply. Pursuant to Bill C-9, the following also qualify: <ol style="list-style-type: none"> the portion of current expenditures directly attributable to SR&ED; capital expenditures to be used in whole or in part (more than 90%) for SR&ED purposes. 	<ol style="list-style-type: none"> No change. No change. No change.
DETERMINATION OF QUALIFYING EXPENDITURES	Corporation must determine and identify clearly qualifying expenditures and supply appropriate documents (for example, receipts).	Existing rules continue to apply.	<ol style="list-style-type: none"> Existing rules continue to apply. or Corporation can waive current method and use the alternative method prescribed in the Act. If it chooses the latter option, it must waive the deductibility of overhead expenditures attributable to SR&ED and claim a tax credit in an amount corresponding to these costs. 	<ol style="list-style-type: none"> No change. No change.

Source: Industry Canada; Revenue Canada; Department of Finance; and Research Branch, Library of Parliament.

TABLE 2
SR&ED TAX CREDIT

SPECIFICS	BEFORE 1987	FROM 1987 TO 1993	SYSTEM IN EFFECT SINCE 1994	NEW PROPOSALS
QUALIFYING EXPENDITURES	<ol style="list-style-type: none"> 1. Current and capital expenditures incurred in Canada qualify for a tax credit. 2. Expenditures incurred abroad do not qualify for a tax credit. 	<ol style="list-style-type: none"> 1. Current and capital expenditures incurred in Canada, except those associated with building acquisition, qualify for a tax credit. 2. Existing rules continue to apply. 	<ol style="list-style-type: none"> 1. Existing rules continue to apply. 2. Existing rules continue to apply. 3. If the corporation chooses the alternative method to calculate qualified expenditures, it may claim a tax credit in respect of general SR&ED costs. 4. The corporation may claim a tax credit for shared-used equipment used more than 50% of the time for SR&ED activities. 	<ol style="list-style-type: none"> 1. No change. 2. No change. 3. No change. 4. No change.
CARRYING OPTION	Unused tax credits may be carried back three years or forward seven years.	Unused tax credits may be carried back three years or forward ten years.	Existing rules continue to apply.	No change.
RATE OF TAX CREDIT				
<ol style="list-style-type: none"> 1. CCPC with a taxable income of less than \$200,000: <ul style="list-style-type: none"> - on first \$2 million of current SR&ED expenditures; - on other expenditures 2. CCPC with a taxable income of between \$200,000 and \$400,000 	<p>35%</p> <p>20%</p> <p>20%</p>	<ol style="list-style-type: none"> 1. Existing rules continue to apply. 2. Existing rules continue to apply. 	<ol style="list-style-type: none"> 1. Existing rules continue to apply to CCPCs with taxable incomes of less than \$200,000. 2. CCPCs with taxable incomes of between \$200,000 and \$400,000 now qualify for a tax credit similar to the one available to small CCPCs up to a limit which decreases as taxable income rises. 	<ol style="list-style-type: none"> 1. No change. 2. CCPCs with taxable incomes of between \$200,000 and \$400,000 qualify for a tax credit similar to the one available to small CCPCs up to a limit which decreases as taxable income rises.
3. Other corporations	20%	Existing rules continue to apply.	Existing rules continue to apply.	3. No change.
4. Atlantic and Gaspé	30%	Existing rules continue to apply.	Existing rules continue to apply.	4. Varies according to the size of the corporation.
5. Maximum claim ceiling for CCPC with a taxable income over \$200,000	None	5. 75% of federal tax payable.	5. Ceiling of 75% eliminated.	5. No change.

TABLE 2
(Cont'd)

TAX CREDIT REFUND OPTIONS				
1. CCPC with taxable income of less than \$200,000 2. CCPC with taxable income of between \$200,000 and \$400,000 3. Other corporations	1. Refund corresponds to 100% of tax credit applicable to current expenditures and to 40% of tax credit in respect of capital expenditures. 2. Rate of 20% applies. 3. Rate of 20% applies.	1. Existing rules continue to apply. 2. No refund. 3. No refund.	1. Existing rules continue to apply. 2. CCPCs with taxable incomes of between \$200,000 and \$400,000 now qualify for tax credit refund at the same rate as small CCPCs, that is, tax credit of 100% on current and of 40% on other expenditures. 3. Existing rules continue to apply.	1. No change. 2. CCPCs with taxable incomes of between \$200,000 and \$400,000 qualify for a tax credit refund similar to the one available to small CCPCs, with a limit based not on taxable corporate income but on taxable capital. 3. No change.

Source: Industry Canada; Revenue Canada; Department of Finance; and Research Branch, Library of Parliament.

2. 1987 to 1993

In an effort to broaden its tax base and also probably to limit abuses of the tax system as it applied to SR&ED, in 1987 the federal government launched a major reform of tax incentives for scientific research. Its entire focus was on the traditional tax measures, that is the deduction and tax credit, and on redefining the meaning of "scientific research and experimental development" as set out in the *Income Tax Act*.

The legislation was amended to ensure that the beneficiary of the tax incentives in respect of SR&ED was directly associated with the research activities; the effect of this provision was to limit the number of passive investors. Furthermore, companies would no longer qualify for tax incentives unless the expenditures incurred were "all or substantially all attributable" (90% or more) to SR&ED activities. The government then moved to exclude expenses incurred for the purchase of buildings from the definition of SR&ED expenditures. The amount of tax credit that could be claimed for SR&ED was limited to 75% of federal tax payable. However, carry-forward provisions were enriched so that unused credits could be carried back for three years or forward for ten. Finally, the federal government eliminated the refundable tax credit at the basic rate of 20% for large corporations, but maintained the partial (40%) or full (100%) refund for small CCPCs.

3. Since 1994

The current tax system as it applies to SR&ED incorporates part of the components of the 1987 reform and other improvements made to the *Income Tax Act* in 1994.

As in the past, deductibility of SR&ED expenditures depends on the type of expenditures and where they were incurred. Both current and capital expenditures incurred in Canada are deductible; however, of expenditures incurred outside Canada, only current expenditures are deductible. SR&ED expenditures incurred in Canada may either be deducted in the taxation year in which they are incurred, or carried forward and deducted later. Current expenditures incurred outside Canada must be deducted immediately.

Provisions respecting eligibility are much broader than before. Under the new system, the deductions of corporations are no longer limited to expenditures that are all, or

substantially all, attributable to SR&ED activities. Since 1994, the "portion of expenditures directly attributable" to SR&ED activities has also been deductible. For example, if 30% of a building is used for SR&ED and the remaining areas for production or manufacturing purposes, corporations can claim a deduction for that portion of the costs associated with the use of the building for SR&ED purposes.

Of course, some companies may have a hard time pinpointing exact costs and assessing the specific portion of expenditures directly attributable to SR&ED. Two options are available under the legislation. Corporations can choose either to claim a deduction based on a portion of the expenditures that has been accurately assessed (with supporting evidence), or they can use the "alternative method," which was introduced in 1994. This involves waiving the deduction for overhead costs (one of the categories of current expenditures) and claiming a tax credit for these costs, which is calculated on the basis of a "proxy amount." This provision will be explained in greater detail below.

The SR&ED tax credit currently granted by the federal government is substantially similar to that offered to Canadian companies since 1987. The general tax credit rate is set at 20%, but is 30% in the Atlantic provinces and the Gaspé region and 35% for small CCPCs. Unused tax credits can still be carried back three years or forward ten years. However, four significant improvements made to the legislation in 1994 distinguish the current tax credit system from the last.

First, a corporation that waives the inclusion of overhead costs in the calculation of SR&ED expenditures qualifying for the deduction can now claim a tax credit in respect of these costs. The latter are estimated according to a proxy amount set by the legislation at 65% of the salary base directly attributable to SR&ED.

Second, since 1994, 50% of the tax credit can be claimed for the cost of equipment used for SR&ED purposes between 50% and 90% of the time. Unlike the full tax credit (for equipment used for SR&ED purposes 90% to 100% of the time), which can be claimed for the year of use, the new tax credit must be claimed in two equal instalments in the two years following the year of use. Table 3 illustrates how the tax credits on shared equipment use are now delivered to a company in a 20% tax credit region.

TABLE 3
TAX CREDIT ON \$100 EXPENDITURE FOR SHARED USE EQUIPMENT
(20% TAX CREDIT)

	Percentage of Asset Used for SR&ED		
	0% - 49%	50% - 89%	90% and More
Year 1	0	0	\$20
Year 2	0	\$ 5	0
Year 3	0	\$ 5	0
Total Tax Credit	0	\$10	\$20

Source: Government of Canada, "Modifications to the Scientific Research and Experimental Development Tax Incentives," *News Release*, 2 December 1992.

Thirdly, as a result of the 1994 amendments, CCPCs with taxable earnings of between \$200,000 and \$400,000 qualify for the tax credit for small corporations. The one restriction, however, is that the tax credit decreases as the corporation's taxable income rises. Specifically, the business limit on SR&ED expenditures (currently set at \$2 million) is reduced by \$10 for each dollar by which the taxable income of the corporation exceeds \$200,000.

Fourthly, CCPCs with taxable incomes of between \$200,000 and \$400,000 also qualify for a tax credit refund similar to that granted to small businesses. Here again, a business limit based on taxable income applies.

The federal government also announced further changes to SR&ED tax incentives in its 22 February 1994 budget. Plans call for the elimination, as of 31 December 1994, of the special tax credit rate of 30% granted to corporations involved in SR&ED in the Atlantic provinces and the Gaspé region. Rates will henceforth be determined on the basis of the corporation's size, as is the case elsewhere in the country. Evidently the preferential rate failed to attract new investment to these regions and to alleviate economic disparities. The Minister of Finance did not specify in his budget speech if other, more effective and suitable, measures would be introduced to stimulate industrial and technological growth in these regions.

With respect to the tax credit for SR&ED available to CCPCs with taxable incomes of between \$200,000 and \$400,000, the budget called for a ceiling to be calculated not on taxable

income, but on the corporation's taxable capital. According to the Finance Minister, the reason for the proposed change is to ensure consistency with the changes to the business ceiling with respect to the general application of the corporate income tax system. From now on, the ceiling on SR&ED expenditures will decline as the corporations's taxable capital in Canada increases from \$10 to \$15 million. The proposed measure could reduce the amount of a corporation's tax credit or the refundable portion of the tax credit. Table 4 illustrates the impact of these changes and provides a comparison of the existing system and the proposed system.

TABLE 4
SR&ED TAX CREDIT EARNED BY CORPORATIONS
WITH TAXABLE INCOMES OF BETWEEN \$200,000 AND \$400,000⁽¹⁾

Type of Corporation		Total Credit Earned			Refundable Credit		
Taxable Income	Taxable Capital	1987	1994	1994 Budget	1987	1994	1994 Budget
\$	Million \$	\$	\$	\$	\$	\$	\$
200,000	10.5	700,000	700,000	700,000	700,000	700,000	700,000
200,000	12.5	700,000	700,000	550,000	700,000	700,000	350,000
200,000	15.0	700,000	700,000	400,000	700,000	700,000	nil
300,000	10.0	400,000	550,000	550,000	nil	350,000	350,000
300,000	12.5	400,000	550,000	475,000	nil	350,000	175,000
300,000	15.0	400,000	550,000	400,000	nil	350,000	nil
400,000	10.0	400,000	400,000	400,000	nil	nil	nil
400,000	12.5	400,000	400,000	400,000	nil	nil	nil
400,000	15.0	400,000	400,000	400,000	nil	nil	nil

(1) Assuming current SR&ED expenditures of \$2 million and a tax credit rate of 20%.

Source: Minister of Finance, the Honourable Paul Martin, *Tax Measures: Supplementary Information*, 22 February 1994; Minister of Finance, the Honourable Don Mazankowski, *The 1993 Budget*, 26 April 1993; Research Branch, Library of Parliament.

Moreover, Bill C-27, which received Royal Assent on 15 June 1994, requires companies to identify expenditures that qualify for the SR&ED tax credits. Formerly, Revenue Canada had to make adjustments to SR&ED tax credits when they were not claimed in the taxation

year in which the expenditures were incurred. Under Bill C-27, companies themselves must now calculate the portion of the expenditures qualifying for a tax credit that they wish to carry forward. In addition, under the legislation, companies must declare their qualifying expenditures not later than two years after they are incurred. These amendments should simplify the administration of the SR&ED tax credit program and reduce costs. Since it is companies that benefit from these tax measures, it seems appropriate that they should be responsible for calculating the adjustments. The amendments will likely limit the number of claims arising from previous fiscal years.

Finally, the federal budget brought down on 27 February 1995 announced additional changes to tax credit provisions. The budget proposes changes in four specific areas: information technology R&D, contract R&D and non-arm's length transactions; third-party payments; and unpaid amounts.

D. Comments on Tax Measures Related to SR&ED

The main advantage of these tax measures is clearly that they are generally applicable, while leaving companies free to make decisions on their scientific research activities. The private sector determines for itself the level and type of SR&ED activities to carry out, basing decisions on cost-effectiveness and marketing potential.

When they form a simple tax structure, tax incentives can be relatively inexpensive to administer and apply. However, the frequent changes to federal SR&ED tax incentives have instead increased the complexity of the taxation system and created an environment of fiscal uncertainty for businesses planning to invest in SR&ED.

The complexity of the SR&ED tax incentive system has come about partly because of the growing number of criteria governing the system's application. It is also tied in partly with the way scientific research is defined for tax purposes. Corporations are required to explain in detail the nature of the SR&ED activities and demonstrate the scientific and technological content of their work. As such, it is difficult at times for them to determine whether a particular activity can be considered as scientific research or not.

Like all tax expenditures, SR&ED tax incentives also raise the problem of cost control. Improperly or inadequately assessed tax incentives can turn out to be attractive tax

loopholes and result in a significant loss of government revenue. Fortunately, in the 1980s, the federal government took steps to eliminate potential abuses of the taxation system. This is not to say, however, that it is completely effective in its control and evaluation of the SR&ED tax incentives for Canadian companies. In this regard, in his 1994 Report, the Auditor General was critical of the lack of evaluation, and suggests that regular and comprehensive control of SR&ED tax measures be exercised in order to alleviate costs resulting from the federal government shortfall. It would appear that the federal government has decided to follow up on the Auditor General's recommendations. In the 1995 budget speech, it was announced that the government intended to evaluate SR&ED tax measures on an ongoing basis and to amend them as required to ensure the continued efficiency and fairness of the tax system. **In the 6 March 1996 budget, the Finance Minister announced that the government would complete by year's end its evaluation of the relevance, impact and efficiency of SR&ED tax incentives.**

Available data on the cost of SR&ED tax incentives give a general idea of the relative size of the federal government's indirect funding of private sector research. According to a recent Industry Canada resource book (1994), SR&ED tax expenditures account for nearly 15% of overall federal funding of science and technology, while the government, which funds nearly 8% of overall industrial SR&ED, also indirectly funds a further 18% through tax incentives. In 1991 the federal government awarded \$1.017 billion in tax credits, the most significant federal tax measures, to 6,249 businesses operating in Canada. In 1986, 4,413 companies claimed a total of \$759 million in tax credits. Thus, tax credits are proving to be attractive to a growing number of businesses and represent a major cost to the federal government.

However, the impact of these tax expenditures on industrial SR&ED growth is difficult to evaluate and thus is not really clear. On the one hand, companies have several years in which to file their tax return. On the other hand, some of the new measures were introduced too recently to be in full operation. Moreover, the federal government does not appear to have the necessary mechanisms to assess results.

Warda found (1990) that of all industrialized countries, Canada offers the most attractive SR&ED tax incentives. According to his analysis, the overall federal and provincial tax incentives available allow Canadian companies to recover, depending on the province, from 50% to

60% of their initial SR&ED investment. In other words, because of the tax incentives, companies could double their SR&ED activities for a given investment. However, it is impossible to be sure from this study whether the tax incentives are prompting Canadian companies to incur additional SR&ED expenditures.

In his 1994 Report, the Auditor General of Canada noted that certain companies realized only recently that they had qualified for the SR&ED tax credit for several years. They therefore took advantage of the carryover provisions to claim a credit for all those years; as a result, a considerable increase in federal government tax expenditures is to be expected. The Auditor General points out that these companies' research activities do qualify for the credit. However, a recent article in the *Toronto Globe and Mail* reveals some disquieting facts, for example, that Canadian chartered banks qualified for SR&ED tax credits for information technology development expenditures. Thus, there are problems defining and interpreting the expression "scientific research and experimental development." In the 1995 budget speech it was announced that the federal government would examine this issue and make changes where necessary. Until the review's conclusions were in, all information technology SR&ED performed by financial institutions after 27 February 1995 was to be excluded from the definition of SR&ED. **The results of this examination were announced in the budget brought down on 6 March 1996. The government concluded that the rules respecting SR&ED tax credits should apply to all businesses investing in information technology, including financial institutions. The government believes that any future problems can be solved by amending the administrative guidelines and by broadening the scope of the evaluations.**

It is to be hoped that federal officials will exercise better control of the tax deduction and credit and will evaluate them so as to enhance effectiveness of the federal government's SR&ED tax incentives.

PARLIAMENTARY ACTION

The federal government has for several years been offering a variety of tax incentives to stimulate industrial SR&ED. Changes over time have made it possible to increase the

number of beneficiaries eligible for these tax concessions. The most notable change has certainly been to allow non-taxable corporations to receive a tax credit refund. The greatest abuses of the system have resulted from measures allowing the transfer of corporate tax breaks to outside investors. Although the development of scientific research may be fundamental to the country's growth, that development must be promoted within the framework of an equitable tax system. Amendments to the *Income Tax Act* in 1987 appear to give rise to few abuses and the new measures passed in 1994 will likely increase the number of firms that qualify for SR&ED tax incentives. However, it is quite likely that the proposals in the budget of 22 February 1994 will cancel out these benefits.

To assess the impact of SR&ED tax incentives, we have to determine the attendant costs and benefits. An evaluation of tax expenditures related to scientific research would give a truer picture of government involvement and facilitate changes in the orientation of science and technology policy. While evaluating tax measures and their impact on scientific activity is difficult, it is to be hoped that federal SR&ED tax incentives will come under scrutiny within the framework of the national science and technology review announced on 28 June 1994.

CHRONOLOGY

- 15 August 1944 - The *Act to Amend the Income War Tax Act* was proclaimed. Under these amendments, all current expenditures and one-third of capital expenditures on scientific research could be deducted to a maximum of 5% of taxable corporate income.
- 13 July 1961 - Amendments to the *Income Tax Act* received Royal Assent. Capital expenditures incurred in Canada for research became fully deductible.
- 29 November 1962 - Parliament passed amendments to the *Income Tax Act* allowing corporations to claim an additional tax deduction of 50% for scientific research.
- 10 March 1967 - Coming into force of the *Industrial Research and Development Incentives Act* under which the federal government awarded grants covering 25% of current and capital expenditures in respect of SR&ED.

- 30 June 1978 - Amendments to the *Income Tax Act* enabled corporations to claim an SR&ED tax credit of between 5% and 10%, depending on the size of the firm and the location of SR&ED activities.
- 17 February 1983 - Amendments to the *Income Tax Act* increased tax credit rates by 10 percentage points and provided for credit refunds to non-taxable corporations.
- 19 April 1983 - The Honourable Marc Lalonde, Minister of Finance, presented a paper entitled "Research and Development Policies: A Paper for Consultation," in which he proposed changes to SR&ED tax incentives.
- 18 June 1987 - The Honourable Michael Wilson, Minister of Finance, tabled the *White Paper: Tax Reform 1987* which called for several changes to SR&ED tax incentives.
- 22 February 1994 - In his budget speech, the Honourable Paul Martin, Minister of Finance, announced a variety of changes to SR&ED tax incentives.
- 12 May 1994 - Amendments made to the *Income Tax Act* (Bill C-9) in 1994 received Royal Assent.
- 15 June 1994 - Bill C-27, which required companies themselves to calculate and identify expenditures qualifying for the SR&ED tax credit, received Royal Assent.
- 28 June 1994 - The Honourable John Manley, Minister of Industry, announced a federal science and technology policy review.
- 27 February 1995 - In the budget speech, the Honourable Paul Martin, Minister of Finance, announced additional amendments to SR&ED tax provisions.
- 6 March 1996 - The Minister of Finance announced in his budget that financial institutions investing in information technologies would also be eligible for a SR&ED tax credit and that the government would complete its evaluation of the impact and efficiency of SR&ED tax incentives in 1996.

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